Department of Environment & Conservation

An Overview of Air Pollution Control Permitting for Atlas BX

Facility ID 63-0385
Permit Log 974083

Department of Environment & Conservation

Why does the State of Tennessee Regulate Air Pollution?

TCA 68-201-103 (in pertinent part)

- It is the intent and purpose of this (law) to maintain purity of the air resources of the state consistent with the protection of normal health, general welfare and physical property of the people, maximum employment and the full industrial development of the state.
- The board and department shall seek the accomplishment of these objectives through the prevention, abatement and control of air pollution by all practical and economically feasible methods.

How does the State of Tennessee "maintain purity of the air resources?"

Via Laws, Regulations & Permits

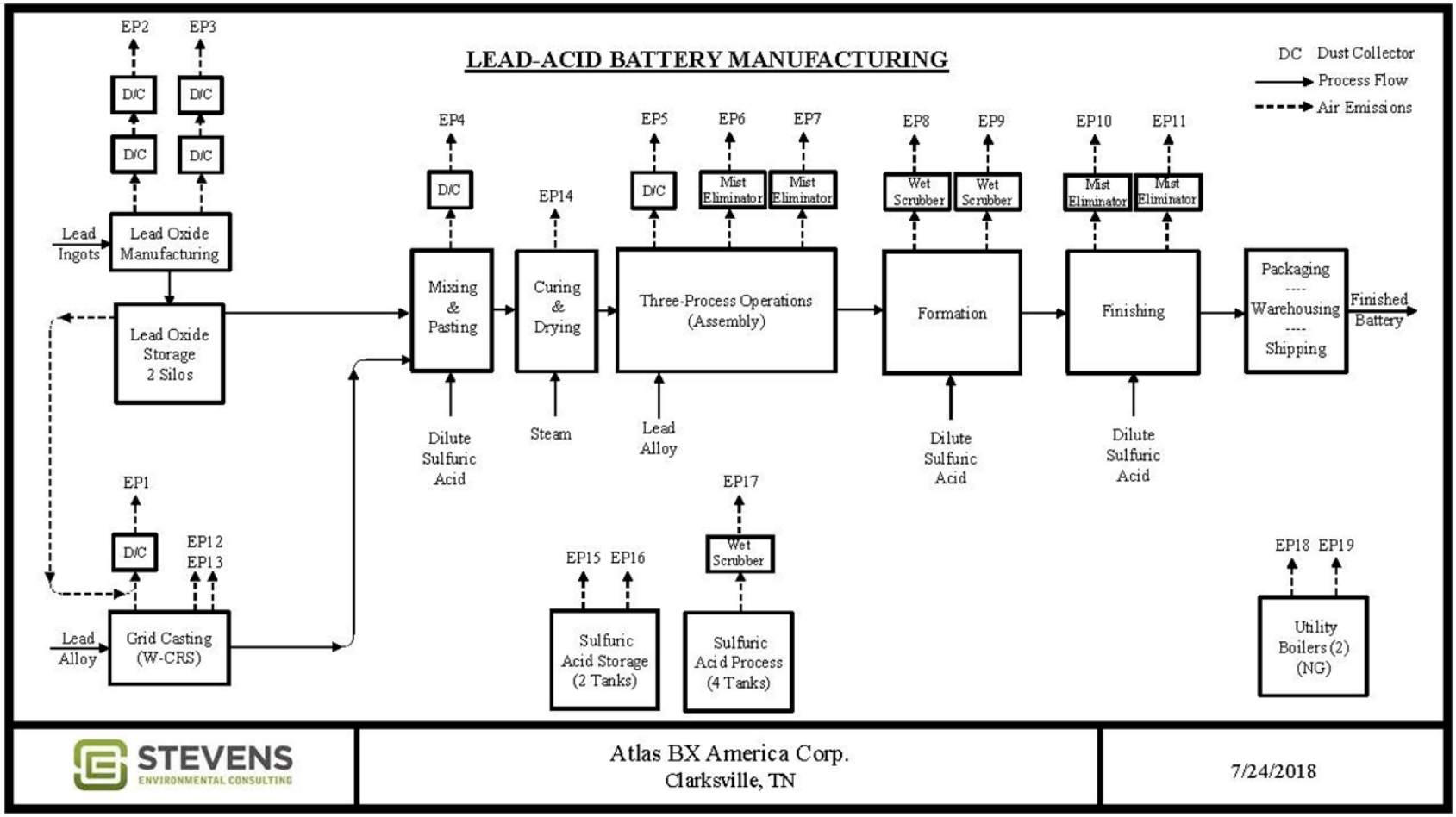
Who Needs a Construction Permit?

- Unless otherwise exempt, any person wishing to construct an air contaminant source or to modify an existing air contaminant source, is required to obtain a construction permit from the Division

Permitting Process

- Atlas BX is required to apply for and obtain a construction permit prior to beginning of construction of their proposed air contaminant sources.
- Apply 90 to 120 days prior to construction – Atlas applied in early May 2018
- Public Notice-30 day comment period – Public notice appeared May 31, 2018 in the Leaf Chronicle
- Application review and draft permit
- Permit Decision

Atlas BX Process Flow Diagram



Regulated Air Pollutants*

- Particulate Matter (PM) < 50 tons
  - Lead (Pb) < 1,000 pounds
- Sulfur Dioxide (SO_2) & Sulfuric Acid (H_2SO_4) < 12 tons, combined
- Products of Fuel Combustion
  - Volatile Organic Compounds (VOC) < 1 ton
  - Nitrogen Oxides (NO_X) < 7 tons
  - Carbon Monoxide (CO) < 6 tons

*projected annual emissions

Facility Classifications

- Major source (Title V)
  - 100 ton/yr of any air pollutant
  - 10 ton/yr of a single HAP
  - 25 ton/yr of any combination of HAPs
- Minor source (non-Title V)
  - Conditional Major
    - PTE greater than Title V thresholds
    - Permit Limits below Title V thresholds
  - True Minor
    - PTE less than Title V thresholds

Conditional Major

- Atlas BX will be classified as a conditional major facility, as its potential to emit particulate matter is shown to be greater than 100 tons per year
- Lead (Pb) is not considered a conditional major pollutant, as its potential to emit is restricted by regulation below the major source threshold, rather than by agreement.
- As a conditional major facility, any non-compliance with terms that are set to limit particulate (which includes lead) emissions must be reported to the Division
- The facility will be inspected at least once per year, and must submit annual compliance reports

Emissions Control

- Primary lead emissions control device will be fabric filters
  - Lead Oxide Production
  - Grid Casting
  - Mixing and Pasting
  - Three process operation
- Other controls: wet scrubbers and mist eliminators
  - Three process operation
  - Formation
  - Finishing
  - Process tanks

Key Regulations

Federal

- NSPS - Subpart KK
- NESHAP - Subpart PPPPPP

State

- Chapter 22: 1200-3-22-.04 Standards for New or Modified Sources of Lead

NSPS – Subpart KK

- Sets lead emission limits for specific categories of processes
- Requires stack testing of any exhaust stack that contains lead
- Visible emissions from any exhaust stack shall not exceed 0 percent opacity (this means that an observer should not see any smoke or visible emissions from any stack)
- The facility must comply with all Subpart KK requirements; however, most processes will have emission limits more restrictive than prescribed by NSPS Subpart KK

NESHAP – Subpart PPPPPP

- Requires compliance with the NSPS
- Specifies control device parameters to be monitored
  - Monitor pressure drop on fabric filters and record once daily or
  - Daily visible emission observation
  - Continuous pressure drop monitoring and recording if any lead source uses a wet scrubber
  - Semiannual inspection of filter integrity

TN Air Pollution Control Regulations: Chapter 22

- **1200-3-22-.04 STANDARDS FOR NEW OR MODIFIED SOURCES OF LEAD**

  (3) The owner or operator of a proposed new or modified source of lead shall perform a source impact analysis to demonstrate that the allowable emission increases from the proposed source or modification would not cause or contribute to a violation of the lead ambient air quality standard in the source impact area including background concentrations. Source impact analysis shall be based on the applicable air quality models and data bases acceptable to the Technical Secretary.

Modeling Results

- Facility submitted a Dispersion Modeling Report summarizing the lead impact analysis conducted for this facility in accordance with TAPCR Chapter 1200-3-22-.04(3).
- Additional emission sensitivity modeling analysis conducted by the APC Division in accordance with EPA and TDEC guidelines demonstrates compliance with the National Ambient Air Quality Standard (NAAQS) for lead, 0.15 µg/ m3.
- The overall (max modeled impact plus background) impact concentration for the applicable 3-month rolling average is below the national and Tennessee Ambient Air Quality Standard (NAAQS) for lead (Pb).

Modeling Results

Emissions Unit	Stack	3-Month Avg. Rolling Max Impact (ug/m3)	Background Concentration (ug/m3)	Total Impact (ug/m3)	Pb NAAQS (ug/m3)	Exceed Pb NAAQS?
All	All	0.12	0.02	0.14	0.15	NO

Ambient Monitoring

- The National Ambient Air Quality Standard (NAAQS) for lead (Pb) is 0.15 $\mu g/m^3$ on a Rolling 3 month average.
- The facility's projected emissions have been modeled to be shown to not contribute to a Pb concentration in the ambient air in excess of the NAAQS.
- The Division will establish lead emission limits on the permit which ensure compliance with the NAAQS.
- Since the facility's Pb emissions are not expected to, nor have been shown to contribute to a Pb concentration in the ambient air in excess of the NAAQS, and since emissions will be less than 0.5 tons per year, ambient monitoring is not a requirement.

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Questions?